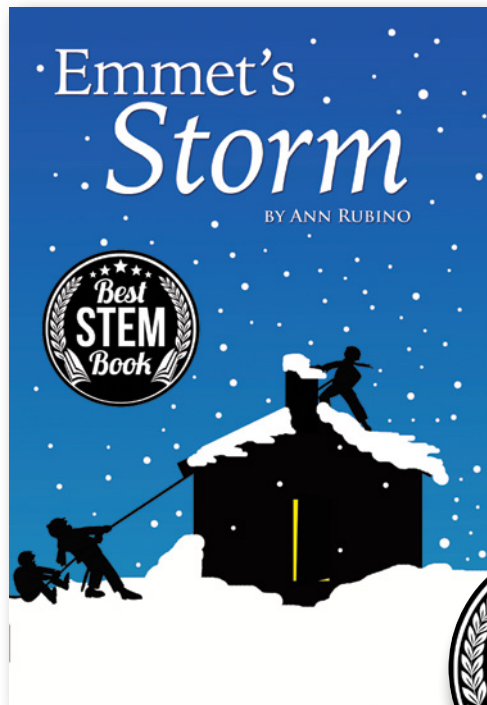




CATREE BOOKS

Integrating STEM and Social Studies

EMMET'S STORM



by Ann Rubino
Best STEM Book 2017



INTEGRATION IDEAS

SCIENCE TOPICS

- Air pressure
- Behavior of fluids
- Weather related
- Batteries and how they work
- Telegraphs as application of electromagnetic forces
- Electricity storage [capacitors]
- Lightning [static charges]
- Combustion/flame color/temperature
- Rocks, especially sedimentary [uses]
- Structures [rigidity, materials]

NATURE OF SCIENCE

- Predicting
- Data collection
- Hypotheses = “educated guess”
- Measurement/recording
- Evaluation of results
- Learning cycle in general

PSYCHOLOGICAL /SOCIAL

- Coping with bullies
- Being different in a good way
- Grief management
- “Pain” of being identified gifted

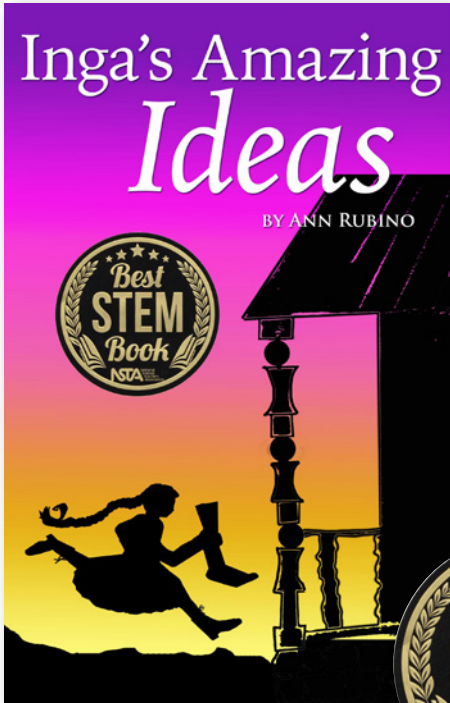
A CURRICULAR BRIDGE

HISTORY: AMERICAN POST-CIVIL WAR

- Everyday life in small towns
- Effects of technology
- Westward movement
- Immigration patterns



INGA'S AMAZING IDEAS



by Ann Rubino
Best STEM Book 2019



INTEGRATION IDEAS

SCIENCE BASICS

- Simple machines, especially pulley systems
- Acceleration of gravity with rolling items
- Complex machines: peeler and cart (relate to earlier "Galileo" experiment)
- Force and motion experiences/inertia as applied
- Motion of joints
- Human body function in motion/handicapped aids
- Problem-solving model

HISTORICAL LINKS

- Orphan Train as a solution to child homelessness in 1800's
- Treatment of handicapped in time period
- Relative prices for items services in 1800s to current time

- Everyday life in small town America compared to current time
- Long-term effects of Civil War on wounded and technology
- Changing economy from hands-on manual labor to machinery-assisted
- Role of children as workers compared to present
- Supervision of children compared to present
- Importance of school then and now

A CURRICULAR BRIDGE

HISTORY: AMERICAN POST-CIVIL WAR

- Orphan Trains/Adoption
- Children on their own
- Making do with what you have
- Everyday life in small towns
- Effects of technology
- Westward movement
- Immigration patterns

MORE

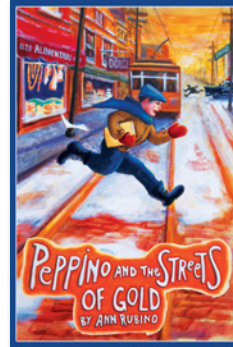
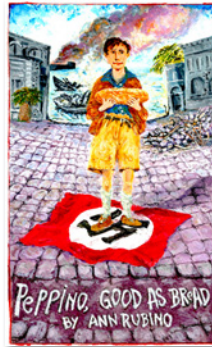
ACTIVITIES / USES

- Writing prompts related to story
- Replicate similar experiments/labs using textbook
- Readers' theater
- Telling old family stories
- Web quests
- Telling part of story from various POV

RESOURCES

- American Girl Stories
- Cobblestones Magazines
- Dear America Series
- Iowa Pathways on PBS
- Catree.com/teaching.html
- NSTA.org
(FREE detailed instructions for labs)

OTHER STORIES



by Ann Rubino

ABOUT THE AUTHOR



While teaching professionally, Ann won the OHAUS Award for innovations in science teaching; worked with the committee on the New Generation Science Standards; reviewed

potential articles and published books for Science & Children magazine; and consulted for the Museum of Science & Industry, Chicago.

She holds her MT(ASCP), B.A.Ed., and M.S. Ed. and an Endorsement in Gifted Education.

Her last teaching assignment was as adjunct at Lewis University, training future teachers in methods of science teaching. Now retired, she reviewed many children's books for the Recommends division of Science & Children and continued her work on the review board.



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